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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/811,735

03/29/2004

Edward Barocela

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05/31/2006

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EXAMINER

DINH, TIEN QUANG

ART UNIT

PAPER NUMBER

3644

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/811,735

Applicant(s)

BAROCELA, EDWARD

Examiner

Tien Dinh

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 23-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/2005</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election of group I, species A in the reply filed on 3/22/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 14, 23-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 3/22/06.

Please note that claim 14 do not read upon species A.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the attachment at one-quarter chord as disclosed in claim 7 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must

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be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It is not understood how the wing can be attached at a one-quarter chord. How is this accomplished? The specification seems to not to disclose this.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-10, 12, 16, 17, 19, 20, 21, and 22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Groutage et al.

Groutage et al teaches a missile that has a fuselage member, engine (that is capable of thrusting to transonic speed), wing actuator that pivotally adjust the wing (attached to the upper part of the fuselage) that is aligned with the fuselage and swings out to a sweep angle after the wing is deployed. Although, it is not disclosed, the wings of Groutage et al appears to have an aspect ratio of less than 7.0. Plus, wings having aspect ratio of less than 7.0 are well known in this day and age that one skilled in the art can use to make the missile operate more efficient.

Re claim 7, it is obvious to one skilled in the art to have attached the wing at one-quarter chord so that the missile can have certain flight characteristic to accomplish its mission. The applicant has not included the criticality of such claimed subject.

Re claim 5, since the wing is pivoted to a deployed position, the wing will have a sweep angle of 30 to 40 degrees during the deployment.

Re claim 8, it is obvious to one skilled in the art to have the fuselage member any size since this merely involves routine steps one skilled in the art would have taken to accomplish certain missions that do not require bigger missiles.

Please note that a speed of Mach .9 is a design step one skilled in the art would have taken to allow the missile to hit the target quickly and efficiently.

The transonic flight for at least 30 minutes is a design step one skilled in the art would have taken to allow the missile to hit the target quickly and efficiently.

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Re claim 12, the examiner takes official notice that antenna positioned within a wing is well known in this day and age and that it is obvious to use one to allow communications.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groutage et al in view of admitted prior art on page 7 or Harris et al.

Groutage et al discloses all claimed parts except for the use of snubbers. However, the admitted prior art or Harris et al teaches that snubbers are well known to be used to reduce vibrations.

It would have been obvious to one skilled in the art at the time the invention was made to have used snubbers in Groutage et al's system as taught by admitted prior art on page 7 or Harris et al to reduce vibration.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groutage et al in view of Cohn.

Groutage et al discloses all claimed parts except for the wound, spring-loaded actuator. However, Cohn teaches that wound, spring-loaded actuators are well known to pivot an object.

It would have been obvious to one skilled in the art at the time the invention was made to have used wound, spring-loaded actuators in Groutage et al's system as taught by Cohn as a substitution of parts to allow a more resilient actuator to pivot the wing.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groutage et al in view of Schroppel.

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Groutage et al discloses all claimed parts except for fins being pivotable. However, fins that pivots are well known to pivot an object.

It would have been obvious to one skilled in the art at the time the invention was made to have Groutage et al's fins pivot as taught by Schroppel to make the missile more maneuverable.

Claims 1-10, 12, 16-22 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chen '795.

Chen '794 teaches a missile that has a fuselage member, engine (that is capable of thrusting to transonic speed), wing actuator that pivotally adjust the wing (attached to the upper and lower part of the fuselage, see figures) that is aligned with the fuselage and swings out to a sweep angle after the wing is deployed. Although, it is not disclosed, the wings of Chen '795 appear to have an aspect ratio of less than 7.0. Plus, wings having aspect ratio of less than 7.0 are well known in this day and age that one skilled in the art can use to make the missile operate more efficient.

Re claim 7, it is obvious to one skilled in the art to have attached the wing at one-quarter chord so that the missile can have certain flight characteristic to accomplish its mission. The applicant has not included the criticality of such claimed subject.

Re claim 5, the wing sweeps at angle of 30 to 40 degrees during the deployment if desired. The sweep angle can be at any desired angle to have a more effective flying missile.

Re claim 8, it is obvious to one skilled in the art to have the fuselage member any size since this merely involves routine steps one skilled in the art would have taken to accomplish certain missions that do not require bigger missiles.

Please note that a speed of Mach .9 is a design step one skilled in the art would have taken to allow the missile to hit the target quickly and efficiently.

The transonic flight for at least 30 minutes is a design step one skilled in the art would have taken to allow the missile to hit the target quickly and efficiently.

Re claim 12, the examiner takes official notice that antenna positioned within a wing is well known in this day and age and that it is obvious to use one to allow communications.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen '795 in view of admitted prior art on page 7 or Harris et al.

Chen '795 discloses all claimed parts except for the use of snubbers. However, the admitted prior art or Harris et al teaches that snubbers are well known to be used to reduce vibrations.

It would have been obvious to one skilled in the art at the time the invention was made to have used snubbers in Chen '795's system as taught by admitted prior art on page 7 or Harris et al to reduce vibration.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen '795 in view of Cohn.

Chen '795 discloses all claimed parts except for the wound, spring-loaded actuator. However, Cohn teaches that wound, spring-loaded actuators are well known to pivot an object.



It would have been obvious to one skilled in the art at the time the invention was made to have used wound, spring-loaded actuators in Chen '795's system as taught by Cohn as a substitution of parts to allow a more resilient actuator to pivot the wing.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen '795 in view of Schroppel.

Chen '795 discloses all claimed parts except for fins being pivotable. However, fins that pivots are well known to pivot an object.

It would have been obvious to one skilled in the art at the time the invention was made to have Chen '795's fins pivot as taught by Schroppel to make the missile more maneuverable.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Clark et al, Liu et al, and Schnabele et al teach flying crafts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 571-272-6899. The examiner can normally be reached on 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TD

A handwritten signature in black ink, appearing to read "Tim" followed by a stylized flourish.